

EXHIBIT 1

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF PUERTO RICO**

GERARDO CAMPOS,
YADIRA D. VEGUILLA ROSARIO,
and the conjugal Partnership constituted
between them,
And CAMILA A. CAMPOS VEGUILLA

Plaintiffs,

CASE NO. 12-01529

V.

SAFETY-KLEEN SYSTEMS, INC., *et al.*

Defendants.

DECLARATION OF DR. PETER J. SHIELDS

Comes now, Peter J. Shields, M.D, who, pursuant to 28 U.S.C.A. § 1746 declares the following to be true subject to the penalty of perjury:

In 2008, I made a statement at a deposition that benzene exposure can cause chronic myelogenous leukemia (“CML”). At this time, I cannot recall the context for my response, but I have since reviewed the entire deposition and confirmed that it contained no other mention of CML or discussion of benzene and CML, besides the reference cited by Plaintiffs at page 39:5-21. The case in which I gave that testimony had nothing to do with CML, I was not designated to discuss CML, nor had I undertaken an evaluation of the literature specific to benzene exposure and CML in preparation for that deposition. The party who retained me did not benefit by my statement related to CML, and it was entirely unrelated to my testimony and opinions in that case. The current scientific literature does not support the opinion I gave in 2008. For this case, I undertook an evaluation of the literature on benzene exposure and CML as of 2014, as explained in my February 28, 2014 report and May 9, 2014 deposition.

Since 2008, there have been a number of publications that support my opinions in this case that there is insufficient data to conclude that benzene causes CML. In fact, this relationship was recently considered by the International Agency for Research on Cancer, in 2009 with the full report in 2012, who considered CML and did not even provide a conclusion for limited evidence [1]. Several research studies specifically for CML risk factors that have recently been published cover large groups of workers and varied study designs, strengthening my opinions. These include a review article and meta-analysis of 15 separate studies [2]. The authors wrote: "The meta-analysis indicated consistently a lack of association between benzene exposure and the risk of CML." A large population-based study published in 2009 using a huge registry of more than 15 million people failed to find associations for occupations that might involve benzene exposure and CML [3]. In a separate European very large prospective study, published in 2013, Saberi and colleagues considered benzene exposure specifically and CML risk, and found the results to be not statistically elevated [4]. For a different type of study, several publications from a large pooled analysis of refinery workers, some of whom have very large exposures, also did not find an increased risk of CML [5;6]. The authors wrote: "Conclusions: No convincing association was identified between MPD or CML and low exposure to benzene. The greater risk for exposures experienced in the 20 years before diagnosis needs investigating in more powerful studies with a wider range of exposure to benzene, and the biological plausibility further examined from a mechanistic viewpoint." These studies were published in 2012 and 2014. Also, a separate 2012 meta-analysis done by researchers at the National Cancer Institute failed to find a statistical association between benzene exposure and CML considering many types of occupations [7]. The strengths and limitations of the above studies have been discussed in my report.

I have reviewed the motions by Plaintiffs and these do not alter my opinions, nor do they represent my opinions accurately. The above research studies and opinions by various agencies show that as of today, benzene cannot be considered a cause of CML.

I declare under the penalty of perjury that the foregoing is true and correct.

A handwritten signature in black ink, appearing to read "Peter J. Shields", is centered within a faint, light gray rectangular border.

Dr. Peter J. Shields

Dated: June 23, 2014

Reference List

1. International Agency for Research On Cncer. Chemical Agents and Related Occupations: A Review of Human Carcinogens 100F. (100F). 2012. Lyon, France, World Health Organization.
Ref Type: Serial (Book,Monograph)
2. Khalade,A., Jaakkola,M.S., Pukkala,E., and Jaakkola,J.J. (2010) Exposure to benzene at work and the risk of leukemia: a systematic review and meta-analysis. *Environ.Health*, **9**, 31.
3. Pukkala,E., Martinsen,J.I., Lynge,E., Gunnarsdottir,H.K., Sparen,P., Tryggvadottir,L., Weiderpass,E., and Kjaerheim,K. (2009) Occupation and cancer - follow-up of 15 million people in five Nordic countries. *Acta Oncol.*, **48**, 646-790.
4. Saberi,H.F., Christopher,Y., Peeters,P., Romieu,I., Xun,W., Riboli,E., Raaschou-Nielsen,O., Tjonneland,A., Becker,N., Nieters,A., Trichopoulou,A., Bamia,C., Orfanos,P., Oddone,E., Lujan-Barroso,L., Dorronsoro,M., Navarro,C., Barricarte,A., Molina-Montes,E., Wareham,N., Vineis,P., and Vermeulen,R. (2013) Occupation and risk of lymphoid and myeloid leukaemia in the European Prospective Investigation into Cancer and Nutrition (EPIC). *Occup Environ.Med.*, **70**, 464-470.
5. Schnatter,A.R., Glass,D.C., Tang,G., Irons,R.D., and Rushton,L. (2012) Myelodysplastic Syndrome and Benzene Exposure Among Petroleum Workers: An International Pooled Analysis. *J.Natl.Cancer Inst.*.
6. Glass,D.C., Schnatter,A.R., Tang,G., Irons,R.D., and Rushton,L. (2014) Risk of myeloproliferative disease and chronic myeloid leukaemia following exposure to low-level benzene in a nested case-control study of petroleum workers. *Occup Environ.Med.*, **71**, 266-274.
7. Vlaanderen,J., Lan,Q., Kromhout,H., Rothman,N., and Vermeulen,R. (2012) Occupational benzene exposure and the risk of chronic myeloid leukemia: a meta-analysis of cohort studies incorporating study quality dimensions. *Am.J Ind.Med.*, **55**, 779-785.